



# COIL NEWS



Enlighten  
your maintenance

a group company of  
**MITSUBISHI**  
HEAVY INDUSTRIES, LTD.

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## Electrical Coil at Maintenance Partners

Maintenance Partners, headquartered in Antwerp and different sites locations is a well known professional player on the repair and maintenance market for rotating equipments and in particular for electrical motors and generators in various sectors like heavy industries, chemical plants, power plants, rail transport vehicles, windmills, etc.

With nine modern and fully equipped workshops (total work floor area of 25.000 m<sup>2</sup>) and more than 400 highly skilled specialists, they service and maintain all kind of rotating machines.

In order to provide a fast, reliable and top quality service for every customer, Maintenance Partners reinforced their internal production capability in line with the customer requirements for electrical coils by adding up a new fully skilled coil shop in Istanbul.

Thanks to strongly coupled operations between Antwerp and Istanbul, Maintenance Partners will guarantee a first class quality production associated with fast delivery time, high flexibility and competitive prices. Our vision: We keep your business running.

EXPERTISE • FLEXIBILITY • CUSTOMER-ORIENTATION • INNOVATION • EAGERNESS • DYNAMISM

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## 1. Our Production Capabilities

Maintenance Partners Coils department will help you solving your service requirements related to the following issues:

**Diamond coils, Hairpin coils, DC coils, Roebel Bars, Magnetic Core, Commutators, Slip rings.**

## 2. Insulation Systems

Hard Coils: (Up to 15 kV)

The coils are hot pressed with the exact geometrical properties reflecting the mechanical and electrical clearances required at the installation. The complete structure gets the granted degree of stiffness before installation.

Calmica-C (Continuous insulation system)

Soft Coils: (VPI up to 13 kV)

The coils remain flexible with the appropriate geometrical properties required at the installation. The complete structure gets the decisive degree of stiffness after the rewinding process and the adequate VPI operation. The maximum voltage strongly depends on the type of resin used for the VPI process.

Samicapor-C (Continuous insulation system)

Hybrid System: (Up to 5,5 kV)

The coils remain flexible thanks to the "b-stage" properties of the insulation material. The complete structure gets the decisive degree of stiffness after the rewinding process and the heat treatment.

Thermoflex

Green System: (Up to 1 kV)

The coils made of insulated copper wire have no extra insulation but simply a finishing layer of glass tape.

Low Voltage Applications

Rotor Coils:

Remark: All these coils can be delivered with the appropriate winding kit (insulation materials, leads, slot wedges ...) in order to smooth the progress of your final restore process.

For all kind of wound rotors

Coils Manufacturing Capabilities



### 3. Main Equipment Capabilities

Our workshop is fully equipped with the following equipments: hot presses (6), spreader machines (4), and winding coil machines (3).

Hot Presses:	Coils straight part up to 4,0 m
Diamond coils forming machines:	Coils straight part up to 2,2 m
Diamond coils maximum height:	+/- 58 mm
Half coils maximum height:	200 mm
Coils maximum width:	22 mm
Surge Test:	Up to 24 kV
Dielectric Test:	Up to 80 kV

We also have experts to entirely terminate the rewinding procedure of stators and rotors including VPI process and final electrical tests. VPI Capabilities:

1. Internally: 1,76 m maximum diameter
2. Externally: 3,70 m maximum diameter



### 4. Quality

*Thanks to a methodical and controlled approach coupled with a long practice and an effective feedback from the workshop, a properly dedicated computer program is applied to define and confirm each coil essential characteristics as magnetic properties, wire current densities, insulation requirements...*

Also, in addition to the fact our high voltage test procedures exceed the well-known IEEE procedures (IEEE 522-2004 IEEE Guide for Testing Turn Insulation of Form-Wound Stator Coils for Alternating-Current Electric Machines et IEEE 286-2000 IEEE Recommended Practice for Measurement of Power Factor Tip-Up of Electric Machinery Stator Coil Insulation), Maintenance Partners are ISO 9001 certified ensuring the highest level of quality and the best consistency.



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